STATEMENT OF SENATOR ERNEST F. HOLLINGS
HEARING ON GLOBAL CLIMATE CHANGE
MAY 17, 2000

Mr. Chairman, thank you for holding this hearing today on global climate change, which I hope will be only one of many. It's been about 3 years since our last full committee hearing on climate change, so I welcome this opportunity to hear what the science can now tell us about this important topic. This Committee has worked hard to ensure that the federal government has the best research and information possible about global warming, as well as other types of climate changes. I'm glad to see our investments are bearing fruit and that we are identifying ways to focus our research to help us make decisions now and in the decades ahead.

During the 1980s, a number of us here on the Committee became increasingly concerned about the potential threat of global warming and loss of the ozone layer. In 1989, I sponsored the National Global Change Research Act, which attracted support from many members still serving on this Committee including Chairman McCain as well as Senators Stevens, Inouye, and Gorton. In 1990, after numerous hearings and roundtable discussions, Congress enacted the legislation, thereby creating the U.S. Global Climate Research Program.

When we passed the Global Change Research Act, we knew it was the first step in investigating a very complex problem. We placed a lot of responsibility in NOAA, the scientific agency best suited to monitor and predict ocean and atmospheric processes. We need to renew this ocean research commitment to ensure we better understand the oceans, the engines of climate. The so-called "wild card" of the climate system, the oceans are capable of dramatic climate surprises we should strive to comprehend. In addition, the oceans are critical to our continued well-being. I am particularly interested that we pursue the questions covered by the recent NRC report, *From Monsoons to Microbes: Understanding the Ocean's Role in Human Health.* This excellent report tells everyone here -- even those who don't live on the coast -- that understanding our oceans is of the utmost national importance. The Oceans Act this Committee approved only a few weeks ago would go a long way to ensuring that we give priority to these important ocean research questions.

I am glad to report that the research accomplished under the National Global Change Research Act has led to increased understanding of global climate changes, as well as regional climate phenomena like El Nino/Southern Oscillation (ENSO). We now have a better understanding of how the Earth's oceans, atmosphere, and land surface function together as a dynamic system, but we cannot stop there. Only recently, NOAA measured an important increase in temperature in all the world's

oceans over a 40 year period. We need to understand the causes and how that will affect us. All this research ensures that federal and state decisionmakers get better information and tools to cope with such climate related problems as food supply, energy allocation, and water resources.

While we have learned an astonishing amount about climate and other earth/ocean interactions in only a decade, we have other critical questions that require further research to answer. Many of these questions are relevant not only to improving our scientific understanding, but also to contributing to our future social and economic well-being. For example, climate anomalies during the past two years -- most directly related to the 1997-1998 El Nino event -- have accounted for over $30 billion in impacts worldwide. When impacts from the recent floods in China are included, these direct losses could rise to $60 billion. This most recent El Nino claimed 21,000 lives, displaced 4.5 million people, and affected 82 million acres of land through severe flood, drought, and fire. When we better understand the global climate system, and its relationship to regional climate events like El Nino, we may be able to find ways - such as improved forecasting and early warning - to avoid some of the severe impacts.

Under current global warming scenarios, scientists predict a 6 to 37 inch rise in sea level by the year 2100 that will put our coastal areas at an increased risk of flooding. This could have severe consequences for coastal states such as mine, particularly if climate change has any bearing on the frequency or severity of hurricanes. While we have been in a pattern of infrequent hurricane landfalls along the East Coast, it is possible that recent severe storms signal a return to conditions similar to those of the 1930s, 1940s, and 1950s when huge storms were frequently making landfall. If so, and particularly if global warming increases our vulnerability to flooding, we must develop the science to better understand and respond to any environmental changes in weather patterns.

I welcome our witnesses to discuss the current state of science on global climate change. I am anxious to hear about the progress we've made towards better understanding the complex temperature and precipitation pattern changes, and where our research efforts are going in the upcoming decade. I hope today's hearing will reinvigorate this Committee's leadership in promoting sound research on these important scientific questions.